

U.S.S.N. 10/621,134

- 2 -

SBC 0130 PA

**IN THE CLAIMS:**

1-20. (canceled)

21. (original) A high-speed data transmission network comprising a controller located at a central office or a remote terminal and in operative communication with a plurality of subscriber premises, said plurality of subscriber premises transmitting a first upstream signal on a first frequency band, said central office or remote terminal broadcasting a downstream signal to each of said plurality of subscriber premises on a second frequency band, which is higher in frequency than said first frequency band, and receiving said first upstream signal;

said downstream signal comprising one or more subscriber group signals and a plurality of subscriber specific signals; and

said controller providing each of said subscriber premises access to one or more of said one or more subscriber group signals and to a corresponding subscriber specific signal of said plurality of subscriber specific signals;

wherein a plurality of said one or more subscriber group signals are each accessible by each subscriber premise in a group of subscriber premises.

22. (original) A high-speed data transmission network system as in claim 21 wherein said central office or said remote terminal is adapted to receive a second upstream signal from said plurality of subscriber premises on a third frequency band, being higher in frequency than said first frequency band and lower in frequency than said second frequency band.

23. (original) A high-speed data transmission network system as in claim 21 wherein said first upstream signal is a signal received from at least one of the following communication devices: a POTS device or a data network device.

U.S.S.N. 10/621,134

- 3 -

SBC 0130 PA

24. (original) A high-speed data transmission network system as in claim 21 wherein said downstream signal is a signal transmitted only to data network devices.

25. (original) A high-speed data transmission network system as in claim 21 wherein said first frequency band contains only upstream information.

26. (original) A high-speed data transmission network system as in claim 21 wherein said first frequency band contains bi-directional information between said central office and said plurality of subscriber premises.

27. (original) A high-speed data transmission network system as in claim 26 wherein a downstream portion of said first frequency band is assigned for communication between said central office and a single subscriber premise of said plurality of subscriber premises and contains access control for said downstream portion.

28. (original) A high-speed data transmission network system as in claim 21 wherein said downstream signal and said first upstream signal are received by a single subscriber premises of said plurality of subscriber premises through the use of a single twisted wire-pair.

29. (original) A high-speed data transmission network system as in claim 21 wherein each subscriber premises of said plurality of subscriber premises is assigned a subscriber specific address or encryption.

30. (original) A high-speed data transmission network system as in claim 21 wherein said downstream signal and said first upstream signal are transmitted using at least one of the following multiplexing techniques: a time-multiplexing technique, a frequency multiplexing technique, or a statistical multiplexing technique.

U.S.S.N. 10/621,134

- 4 -

SBC 0130 PA

31. (original) A high-speed data transmission network comprising a controller located at a central office and in operative communication with a plurality of subscriber premises, said plurality of subscriber premises transmitting a first upstream signal only on a first frequency band, said central office broadcasting a downstream signal to each of said plurality of subscriber premises only on a second frequency band, which is higher in frequency than said first frequency band, and receiving said first upstream signal;

said downstream signal comprising one or more subscriber group signals and a plurality of subscriber specific signals; and

said controller providing each of said subscriber premises access to one or more of said one or more subscriber group signals and to a corresponding subscriber specific signal of said plurality of subscriber specific signals through the utilization of subscriber group and subscriber premise specific access codes or encryptions;

wherein a plurality of said one or more subscriber group signals are each accessible by each subscriber premise in a group of subscriber premises.

32. (original) A high-speed data transmission network system as in claim 31 wherein said central office is adapted to receive a second upstream signal from said plurality of subscriber premises on a third frequency band, being higher in frequency than said first frequency band and lower in frequency than said second frequency band.

33. (original) A high-speed data transmission network system as in claim 31 wherein a downstream portion of said first frequency band is assigned for communication between said central office and a single subscriber premise of said plurality of subscriber premises and contains access control for said downstream portion.

U.S.S.N. 10/621,134

- 5 -

SBC 0130 PA

34. (original) A high-speed data transmission network system as in claim 31 wherein said downstream signal and said first upstream signal are received by a single subscriber premises of said plurality of subscriber premises through the use of a single twisted wire-pair.

35. (original) A central office controller for governing transmitting, receiving and providing access to information within a high-speed data transmission network, said controller adapted to:

receive a first upstream signal on a first frequency band at a central office from a plurality of subscriber premises;

broadcast a downstream signal on a second frequency band, which is higher in frequency than said first frequency band, said downstream signal comprising one or more subscriber group signals and a plurality of subscriber specific signals to each of said plurality of subscriber premises;

provide access to one or more of said one or more subscriber group signals and to a corresponding subscriber specific signal of said plurality of subscriber specific signals; and

provide each subscriber premise in a group of subscriber premises access to each of a plurality of said one or more subscriber group signals.

36. (original) A controller according to claim 35 further adapted to alter a portion of said downstream signal specifically intended for a single subscriber premise according to subscriber specific characteristics.

37. (original) A controller according to claim 36 wherein said controller alters said downstream signal by adjusting a symbol phase of said downstream signal and adjusting a power-spectral-density of said downstream signal.

U.S.S.N. 10/621,134

- 6 -

SBC 0130 PA

38. (original) A controller according to claim 35 adapted to alter a portion of said downstream signal specifically intended for a single subscriber group according to subscriber group specific characteristics.

39. (original) A controller according to claim 35 adapted to receive a second upstream signal, at said central office, from said plurality of subscriber premises on a third frequency band, higher in frequency than said first frequency band and lower in frequency than said second frequency band.